

**Lake Michigan Fisheries Team  
March 12, 2003  
Plymouth Service Center**

**Draft Notes**

**Next meeting:** April 2, 2003. Plymouth Service Center

**Present:** Bill Horns, Matt Coffaro, Paul Peeters, Al Niebur, Mike Kitt, Sue Marcquenski, Mike Toney, Al Kaas, Pradeep Hirethota, Brad Eggold, Steve Fajfer, Terry Lychwick, George Boronow, Dick Rebicek, Steve Hogler, Justine Hasz, Lee Meyers, Mark Opgenorth, John Janssen, Greg Hill, Laura Madson (Janssen, Hill, and Madson attended only during the afternoon).

**1) Steelhead - analysis/response to Scribner/Bartron**

Background. In January we briefly discussed the Scribner/Bartron approach to estimating survival of steelhead, and a preliminary analysis that John Kubisiak had prepared.

Action. Steve Hogler will finalize a letter to Scribner/Barton explaining why we believe the survival of our stocked steelhead is probably much higher than the estimates they have used.

**2) Steelhead – response to Kaas/Marcquenski memos**

Background. Al Kaas and Sue Marcquenski have pointed out that decisions are needed regarding the numbers and strains of steelhead reared at Kettle Moraine Springs SFH. Al's memo on this subject is attached.

Action. To address the concerns raised by Al and Sue, the LMFT reached a consensus recommendation to cut yearling steelhead and brown trout production by 150,000 annually. Specifically, the LMFT made the following recommendations: 1) Reduce the yearling steelhead production goal for KMS by 30%, starting with the 2003 year class (to be stocked in 2004). This would be a reduction of 150,000 fish annually. 2) Produce 75,000 yearling steelhead at Wild Rose SFH, starting with the 2003 year class, and reduce yearling Seeforellen brown trout production at Wild Rose by that number to make room for the steelhead. These changes would result in a net reduction of 75,000 yearling steelhead and 75,000 yearling Seeforellen brown trout annually, starting with the 2003 year class. 3) To achieve the net reduction of 75,000 yearling steelhead, cut production of each strain by 25,000.

**3) LMC meeting**

Background. The Lake Michigan Committee will meet March 19-20 in Milwaukee. This annual meeting is always a forum for presentations on a variety of topics in the plenary session. This year couple of special meetings have been tacked on. The Yellow Perch Task Group plans to meet on the 18<sup>th</sup> and Mike Jones will hold "Lake Michigan decision analysis workshop" to discuss his findings with agency people and stakeholders. In executive session, the LMC will attempt to formulate and agree to a "terms of reference" for a new lake sturgeon task group. The LMC will also attempt to formulate and agree to an updated charge to the Lake Trout Task Group, so they can move ahead with developing a draft Lake Trout Management Plan for Lake Michigan. At the conclusion of this year's LMC meeting, Bill Horns will begin a two-year term as LMC Chairman.

Action. Discussion item.

#### **4) White perch commercial harvest committee**

Background. Last July, the LMFT asked Tom Hansen, Justine Hasz, Terry Lychwick, and Mike Kitt to meet and develop management options to facilitate the commercial harvest of white perch. Since then a “pink sheet” has been approved, authorizing (but not requiring) us to develop new rules in this area. Also, thought has been given to designing a cooperative gear evaluation study to investigate the feasibility of using appropriately designed gill nets to harvest white perch. A sticking point there is who would pay for the cost of hiring biologists to monitor the study, compile the data, and report the findings. NRDA funds have been mentioned, but may not be appropriate because the purpose of this project would be to help businesses, not to “restore, rehabilitate, replace, and/or acquire natural resources” equivalent to those harmed by PCBs. In 2001, Darrell Bazzell announced a commitment of \$200,000 to “energize yellow perch restoration and overall fisheries management in Green Bay”. Some of those funds remain unspent, and we’ve been asked to consider using them to support the gear evaluation study. We have not agreed to do this because a) the LMFT earlier (July 2002), in response to LMFF recommendations, agreed to use those funds for studies recommended by the Green Bay Yellow Perch Research Group and b) the ultimate source of that money is one or another of the NRDA settlements, and thus will be guided by the terms of the Joint Restoration Plan.

Action. Discussion item. The committee will continue to develop a study design with broad temporal and spatial coverage. Funding questions remain unresolved.

#### **5) Muskie stocking**

Background. Our production system now may have the ability to produce 30,000 fingerling Great Lakes spotted muskie this year. This success has led to questions about how the fish should be distributed beyond the area in Green Bay originally targeted for restoration.

Action. Terry will continue discussions with Green Bay and Lake Winnebago biologists toward developing a strategy/policy for distributing the muskies under varying production levels.

#### **6) Brown trout issues (disposition of 200,000 brown trout, Wild Rose BT stocking)**

Background. The LMFT decision to forego the production and stocking of fall fingerling brown trout leaves us with a question of how to dispose of approximately 200,000 young brown trout that would have been stocked this coming fall.

Action. The LMFT recommended stocking the fish, with half going to each region.

#### **7) NRDA project funding**

Background. LMFT members have received a draft memo, prepared by Bill Horns, from the LMFT to our Guidance Team regarding NRDA project funding (the draft memo is attached). The main purpose of all this is to provide the LMFT perspective on projects that should be funded under the Joint Restoration Plan for the Lower Fox River and Green Bay Area.

Action. Greg Hill and Laura Madson joined the team for this item. The priorities listed in the draft memo were reviewed, and the following final unranked list was adopted by consensus:

- Restore or enhance native fish populations, such as lake sturgeon spotted muskie, yellow perch, lake trout, and northern pike.
- Sustain healthy trout and salmon populations in Green Bay and surrounding waters of Lake Michigan.
- Protect or manage riparian uplands and wetlands where unwise development can harm fish habitat.
- Restore and/or enhance fish habitat.
- Enhance fishing opportunities.
- Control invasive species.

DATE: February 20, 2003

FILE REF: DRAFT

TO: Steve Hewett, Bill Horns

FROM: Alfred Kaas

SUBJECT: Steelhead rearing at Kettle Moraine Springs SFH

**The Problem:**

1. **Significant mortality (~25,000 as of February 21, 2003) at the Kettle Moraine Springs (KMS) SFH** has been flow related, and to some extent density related. **Environmental Gill disease** has been diagnosed and is reflective of flow and density problems.
2. **Water flows are reduced** from the normal 870 gpm, are currently at 609 gpm, a reduction of 30%! This is **primarily due to local drought conditions** and in **some part to water table draw down**.
3. **Flow recovery is uncertain**, depending on precipitation, groundwater recharge and groundwater withdrawal in the area.
4. **Carrying capacity has been exceeded**. The direct relationship between flow and carrying capacity means that we should reduce by 30% the number of fish reared for stocking from 500,600 to 350,420 and transfers from 66,000 to 46,200.
5. **Returns of one or more strains to the brood rivers have been poor**. The cause of these poor returns is unknown. Factors that may contribute include stream flow conditions during the run, post stocking predation, condition of the fish at stocking, the timing of stocking, etc. The reduced flows can have a significant impact on the condition of the fish at stocking, an area over which we can adjust our management by reducing rearing densities.
6. **KMS is being asked to produce too many fish**. Even with normal flows, we believe that KMS is trying to rear too many fish. Production numbers for the facility have grown from stocking approximately 240,00 to over 500,600 fish stocked plus 132,000 transfers. The 3 primary steelhead strains that have been reared, Ganaraska, Chambers and Skamania, are all essentially on the same production schedule, all relying on the same rearing units at the same time. The addition of 2 more strains for evaluation, Arlee and Kamloops, have strained the facility even further despite the additional rearing space that has been leased near by – the Annex.

**Short term Actions:**

1. **Reduce the number of fish reared at KMS**. This is under way. The healthiest fish are being stocked as loading factors approach critical levels. The remaining fish will be treated and stocked this spring.
2. **Investigate alternative diets that may provide full nutrition at reduced feed rates**. Feed trials of a new diet, Bio-Oregon Bio Vita, show great promise. The current condition of the fish and the fat content are good. The quality of this higher cost diet is justified in that it allows KMS staff to feed reduced amounts on an alternating schedule to keep oxygen consumption and waste production to a

minimum during this period of reduced flows.

3. **Maintain the highest possible water quality.** An ozone system is in use and functioning in a portion of the hatchery to deal with dissolved iron problems and appears to be of benefit. This is an addition to the higher quality diets being feed and the reduced feeding schedule.

**Long term Recommendations:**

1. **Permanently reduce the number of fish that the KMS complex is required to rear by at least 100,000.** This can be either a reduction of each of the 3 primary strains reared or the removal of one entire strain of fish. The experimental lots will continue to be reared at the Annex.
2. **Select different species mix** so that life history life stages are staggered. For example, rearing a spring spawning and a Fall spawning strain would mean that there would be no overlap in incubation or early rearing tanks used.
3. **Construct and utilize high capacity, pumped wells** if groundwater flows do not return to “normal” after the drought has ended. This will stabilize water flows, but increase overhead costs. Rearing space is adequate, except for incubation and early rearing.
4. **Research species specific smolt physiology** to better understand its implications to the hatchery environment and stocking conditions/timing (smolt).
5. **Study the relationship between time of stocking and size at stocking** as they relate to creel, size, and number at return to the brood rivers.

DATE: March 3, 2003 - **DRAFT**

TO: LMFT Guidance Team (Michael Staggs, Charles Verhoeven, Chip Krohn)

FROM: Lake Michigan Fisheries Team

SUBJECT: NRDA project funding

The Lake Michigan Fisheries Team asks that you forward the following thoughts and recommendations to Bruce Baker for use by the trustees in implementing the Joint Restoration Plan for the Lower Fox River and Green Bay Area. The purpose of these recommendations is to help the trustees develop a package of fisheries restoration projects that are consistent with the Restoration Plan and that reflect the long-range vision of the Department for Green Bay and the surrounding waters of Lake Michigan. These recommendations are consistent with existing planning documents, most notably the Lake Michigan Integrated Fisheries Management Plan (LMIFMP).

**VISION and PRIORITIES.** The LMIFMP expresses four broad goals: 1) A diverse, balanced, healthy ecosystem. 2) A diverse multi-species sport fishery within the productive capacity of the lake. 3) A stable commercial fishery. 4) Science-based management of the Lake Michigan fisheries resource. Not all activities described in the LMIFMP lend themselves to funding through this NRDA process. The LMIFMP reflects a commitment to protecting and restoring fisheries habitat, restoring native species and providing fishing opportunities. In Green Bay and surrounding waters of Lake Michigan this includes notably 1) actions to assist the recovery of yellow perch, 2) habitat restoration for walleye and northern pike, 3) acquisition of upland and wetland areas important to fish habitat needs, and 4) restoration of lake sturgeon, spotted muskie, and lake trout. The stocking of chinook salmon and other predators is the central management activity on Lake Michigan and Green Bay. That stocking program serves two purposes: providing fishing opportunities and regulating the ecosystem through control of alewives. The following priorities for NRDA funding arise from the LMIFMP and other planning documents:

- Sustain lake trout and chinook salmon populations in Green Bay and surrounding waters of Lake Michigan.
- Restore lake sturgeon populations.
- Protect or manage riparian uplands and wetlands where unwise development can harm fish habitat.
- Restore and/or enhance walleye, smallmouth bass, and northern pike habitat.
- Restore and/or enhance stream trout habitat.
- Enhance fishing opportunities.
- Control invasive species.

**PROCESS.** We were asked to 1) comment on how Department recommendations derived from the LMIFMP and other sources could be effectively integrated with ideas from other agencies or groups and 2) suggest ways of considering and funding projects that may be presented from separate sources over an extended period when negotiated agreements make funding available in blocks. We have three recommendations related to process:

- **Reach agreement early about management authority.** Since restoration activities are by definition management activities, it is important at the outset for the trustees to arrive at agreement about management authority. Misunderstandings and disagreements about this issue have caused friction and resentments in other parts of the Great Lakes, and we have a chance to minimize that problem here. The following points reflect the Department's understanding of our management authority over Great Lakes fisheries:
  - The development of Great Lakes fisheries management policies and the resolution of inter-agency disagreements is guided by the Joint Strategic Plan for Management of Great Lakes Fisheries.
  - All stocking or trap-and-transfer of fish falls within the exclusive management authority of the Wisconsin and Michigan Departments of Natural Resources.
  - All harvest of fish for any purpose is done subject to the management authority of the Michigan or Wisconsin Departments of Natural Resources, except where tribal fishing rights are established by treaty.
  - All lake or stream-bed modifications are subject to the authority of the Wisconsin and Michigan Departments of Natural Resources. In Wisconsin these activities are guided by the Public Trust Doctrine.



- **Agree to a set of fisheries restoration priorities at the outset.** The priorities listed above reflect our vision for fisheries restoration in the affected area.
- **Ask that projects be separated into as many separate, free-standing elements as possible.** That is, as projects are drafted, they should be reduced where possible to sets of separable sub-projects, each of which would serve one of the management priorities if funded alone. This will allow the trustees to move forward with components of large projects even if sufficient funding is not available to complete all aspects.

**PROJECTS.** We were also asked to suggest and rank specific projects that should be considered for funding. We recommend the following project, listed here in order of priority.

- Rebuild Wild Rose State Fish Hatchery.
- Acquire title or easements to the following wetland and upland riparian properties to protect fish habitat:
  - [can we get a list of properties?]
  -
- Build and operate a fish lift and sorting facility to allow upstream lake sturgeon passage at the Menominee Dam.
- Secure long-term control of the property surrounding the Strawberry Creek spawning facility.
- Install appropriate structures at the Park Mill and Menominee Dams to minimize mortality of lake sturgeon passing down stream.
- Create and/or enhance lake sturgeon spawning habitat in the following Green Bay and Lake Michigan streams.
  - [can we get a list of specific projects?]
  -
- Purchase and remove the following dams to allow passage by lake sturgeon.
  - Kletsch Park dam (Milwaukee River)
  - Estabrook Park dam (Milwaukee River)
  - [others?]
  -
- Construct facilities to help block the transport of white perch and other invasive species from Green Bay to the Fox River above the Rapid Croche dam, or to create a treatment zone above that dam.
- Enhance walleye and northern pike habitat on the East side of Green Bay.
- Build rearing ponds for walleye to be stocked in Sturgeon Bay area.
- Initiate experimental control measures for cormorants.
- Remove Suamico River carp pens.
- White perch PCB monitoring (eligible?)